Xudong Xiao

List of Publications by Year in descending order

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76 papers	2,962 citations	218592 26 h-index	168321 53 g-index
76 all docs	76 docs citations	76 times ranked	5153 citing authors

#	Article	IF	Citations
1	Investigation of Humidity-Dependent Capillary Force. Langmuir, 2000, 16, 8153-8158.	1.6	428
2	Mechanically-stacked perovskite/CIGS tandem solar cells with efficiency of 23.9% and reduced oxygen sensitivity. Energy and Environmental Science, 2018, 11, 394-406.	15.6	209
3	Enhancement of low energy sunlight harvesting in dye-sensitized solar cells using plasmonic gold nanorods. Energy and Environmental Science, 2012, 5, 9444.	15.6	203
4	Highly aligned Cu₂O/CuO/TiO₂core/shell nanowire arrays as photocathodes for water photoelectrolysis. Journal of Materials Chemistry A, 2013, 1, 2418-2425.	5.2	195
5	Recent progress in photocathodes for hydrogen evolution. Journal of Materials Chemistry A, 2015, 3, 15824-15837.	5.2	160
6	Understanding Morphology Compatibility for High-Performance Ternary Organic Solar Cells. Chemistry of Materials, 2016, 28, 6186-6195.	3.2	150
7	Limitation factors for the performance of kesterite Cu₂ZnSnS₄thin film solar cells studied by defect characterization. RSC Advances, 2015, 5, 40369-40374.	1.7	121
8	Conformational engineering of co-sensitizers to retard back charge transfer for high-efficiency dye-sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 11553.	5.2	94
9	Nonclassical Behavior in the Capacitance of a Nanojunction. Physical Review Letters, 2001, 86, 5321-5324.	2.9	77
10	High efficiency ternary organic solar cell with morphology-compatible polymers. Journal of Materials Chemistry A, 2017, 5, 11739-11745.	5.2	74
11	Few-Layer MoSe2 Possessing High Catalytic Activity towards Iodide/Tri-iodide Redox Shuttles. Scientific Reports, 2014, 4, 4063.	1.6	70
12	Efficient Visible Photoluminescence from Carbon Nanotubes in Zeolite Templates. Physical Review Letters, 2004, 93, .	2.9	61
13	Title is missing!. Tribology Letters, 2003, 15, 169-176.	1.2	60
14	The epitaxial growth of ZnS nanowire arrays and their applications in UV-light detection. Journal of Materials Chemistry, 2012, 22, 1199-1205.	6.7	55
15	Tip in Situ Chemical Modification and Its Effects on Tribological Measurements. Langmuir, 2000, 16, 662-670.	1.6	52
16	Elucidating the Reaction Pathways in the Synthesis of Organolead Trihalide Perovskite for High-Performance Solar Cells. Scientific Reports, 2015, 5, 10557.	1.6	48
17	Enhancing photocurrent of Cu(In,Ga)Se2 solar cells with actively controlled Ga grading in the absorber layer. Nano Energy, 2019, 62, 205-211.	8.2	47
18	CdTe Nanorod Arrays on ITO: From Microstructure to Photoelectrical Property. Journal of Physical Chemistry C, 2009, 113, 16951-16953.	1.5	45

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19	CdSe Nanotube Arrays on ITO via Aligned ZnO Nanorods Templating. Chemistry of Materials, 2010, 22, 64-69.	3.2	45
20	Geometric and electronic structure of aC60monolayer on Ag(100). Physical Review B, 2007, 75, .	1.1	42
21	A low-temperature formation path toward highly efficient Se-free Cu₂ZnSnS₄ solar cells fabricated through sputtering and sulfurization. CrystEngComm, 2016, 18, 1070-1077.	1.3	37
22	Zinc-based electron transport materials for over 9.6%-efficient S-rich Sb₂(S,Se)₃ solar cells. Journal of Materials Chemistry A, 2021, 9, 12644-12651.	5.2	35
23	Effects of substrate orientation and solution movement in chemical bath deposition on Zn(O,S) buffer layer and Cu(In,Ga)Se2 thin film solar cells. Nano Energy, 2019, 58, 427-436.	8.2	33
24	Searching for a fabrication route of efficient Cu₂ZnSnS₄ solar cells by post-sulfuration of co-sputtered Sn-enriched precursors. Journal of Materials Chemistry C, 2015, 3, 9650-9656.	2.7	32
25	Band bending near grain boundaries of Cu2ZnSn(S,Se)4 thin films and its effect on photovoltaic performance. Nano Energy, 2018, 51, 37-44.	8.2	30
26	Effects of Ammoniaâ€Induced Surface Modification of Cu(In,Ga)Se₂ on Highâ€Efficiency Zn(O,S)â€Based Cu(In,Ga)Se₂ Solar Cells. Solar Rrl, 2019, 3, 1800254.	3.1	29
27	Modification of Mo Back Contact with MoO_{3â^'x} Layer and its Effect to Enhance the Performance of Cu₂ZnSnS₄ Solar Cells. Solar Rrl, 2018, 2, 1800243.	3.1	28
28	Low-energy electron microscopy of CO/Pt(111) surface diffusion by nonequilibrium coverage profile evolution. Physical Review B, 2008, 78, .	1.1	27
29	Ternary morphology facilitated thick-film organic solar cell. RSC Advances, 2015, 5, 88500-88507.	1.7	27
30	Panchromatic light harvesting by N719 with a porphyrin molecule for high-performance dye-sensitized solar cells. Journal of Materials Chemistry C, 2014, 2, 3521.	2.7	26
31	Bandgap optimization of submicronâ€thick Cu(In,Ga)Se₂ solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 1157-1163.	4.4	26
32	Strongly Asymmetric Spectroscopy in Plasmon-Exciton Hybrid Systems due to Interference-Induced Energy Repartitioning. Physical Review Letters, 2017, 119, 177401.	2.9	26
33	Growth and characterization of Au clusters on alkanethiol self-assembled monolayers. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 2351.	1.6	22
34	Stabilization and Manipulation of Electronically Phase-Separated Ground States in Defective Indium Atom Wires on Silicon. Physical Review Letters, 2014, 113, 196802.	2.9	22
35	Hydrogen Evolution from Pt Nanoparticles Covered p-Type CdS:Cu Photocathode in Scavenger-Free Electrolyte. Journal of Physical Chemistry C, 2014, 118, 2306-2311.	1.5	22
36	Tunable spin helical Dirac quasiparticles on the surface of three-dimensional HgTe. Physical Review B, 2015, 92, .	1.1	19

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37	Reducing the Energy Loss to Achieve High Openâ€circuit Voltage and Efficiency by Coordinating Energyâ€Level Matching in Snâ€“Pb Binary Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100287.	3.1	19
38	Defect-enhanced second-harmonic generation in (SimGen)p superlattices. Applied Physics Letters, 1998, 72, 2072-2074.	1.5	15
39	Comparative study of single Cu, Ag, Au, and K atoms adsorbed on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>Si</mml:mtext><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:mn>111</mml:m Physical Review B, 2009, 79, .	1.1	15
40	Charge Transfer, Phase Separation, and Mottâ€“Hubbard Transition in Potassium-Doped Coronene Films. Journal of Physical Chemistry C, 2016, 120, 15446-15452.	1.5	14
41	Electrical rectification by selective wave-function coupling in small Ag clusters on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>Si</mml:mtext><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:mn>111</mml:m Physical Review B, 2010, 81, .	1.1	11
42	Identifying the Numbers of Ag Atoms in Their Nanostructures Grown on a Si(111)-(7 Ã— 7) Surface. Journal of Physical Chemistry C, 2011, 115, 3847-3853.	1.5	11
43	Effective improvement of the photovoltaic performance of black dye sensitized quasi-solid-state solar cells. RSC Advances, 2014, 4, 31759-31763.	1.7	11
44	Fabrication of high-efficiency Cu₂(Zn,Cd)SnS₄ solar cells by a rubidium fluoride assisted co-evaporation/annealing method. Journal of Materials Chemistry A, 2021, 9, 25522-25530.	5.2	11
45	Desorption of polyatomic molecules from the Pt(111) surface by femtosecond laser radiation. Journal of Chemical Physics, 2001, 115, 9490-9495.	1.2	10
46	Role of surface microstructure of Mo back contact on alkali atom diffusion and Ga grading in Cu(In,Ga)Se₂ thin film solar cells. Energy Science and Engineering, 2019, 7, 754-763.	1.9	10
47	Two-Dimensional Rare Earthâ€“Gold Intermetallic Compounds on Au(111) by Surface Alloying. Journal of Physical Chemistry Letters, 2020, 11, 4107-4112.	2.1	10
48	Stable pâ€type Cu:CdS_{1â^'x}Se_x/Pt Thinâ€Film Photocathodes with Fully Tunable Bandgap for Scavengerâ€Free Photoelectrochemical Water Splitting. Solar Rrl, 2020, 4, 1900567.	3.1	10
49	A two-dimensional ErCu₂ intermetallic compound on Cu(111) with moirÃ©-pattern-modulated electronic structures. Physical Chemistry Chemical Physics, 2020, 22, 1693-1700.	1.3	9
50	On-Surface Synthesis of Graphene Nanoribbons on Two-Dimensional Rare Earthâ€“Gold Intermetallic Compounds. Journal of Physical Chemistry Letters, 2020, 11, 5044-5050.	2.1	9
51	Frictional properties of alkanethiol self-assembled monolayers with different thermal annealing. Journal of Applied Physics, 2004, 95, 3411-3416.	1.1	8
52	Initial stages of the adsorption of Ge atoms on theSi(111)â^'(7Ã—7)surface. Physical Review B, 2006, 74, .	1.1	8
53	Failure and Recovery Modes of Submicron Cu(In,Ga)Se₂ Solar Cells with High Cu Content. ACS Applied Materials & Interfaces, 2020, 12, 52857-52863.	4.0	8
54	Formation of Ga double grading in submicron Cu(In,Ga)Se₂ solar cells by pre-depositing a CuGaSe₂ layer. Journal of Materials Chemistry A, 2020, 8, 9760-9767.	5.2	8

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55	The experimental rules of mica as a reference sample of AFM/FFM measurement. Science Bulletin, 2001, 46, 349-352.	1.7	7
56	Probing the generalized magicity of Ag nanoclusters constructed on Si(111) by atomic manipulation. Physical Review B, 2013, 88, .	1.1	7
57	STM study of selenium adsorption on Au(111) surface. Chinese Physics B, 2020, 29, 056801.	0.7	7
58	Systematic investigation of pseudogaps in In, Al, and Pb islands. Physical Review B, 2015, 92, .	1.1	6
59	Controlling adsorption and spin configurations of Co atoms on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Si</mml:mi><mml:mo>(</mml:mo><mml:mn>111</mml:mn> Physical Review B, 2015, 91, .	1.1	6
60	Growth Behavior of Pristine and Potassium Doped Coronene Thin Films on Substrates with Tuned Coupling Strength. Journal of Physical Chemistry B, 2018, 122, 601-611.	1.2	6
61	Role of ZnS Particles in the Performance of Cu 2 ZnSnS 4 Thin Film Solar Cells: A Comparative Study by Active Control of Zinc Deposition in Coevaporated Precursors. Solar Rrl, 2020, 4, 2000334.	3.1	6
62	Application of CVD graphene as transparent front electrode in Cu(In,Ga)Se<inf>2</inf> solar cell. , 2014, , .		5
63	Construction of a gigahertz-bandwidth radio-frequency scanning tunneling microscope based on a commercial low-temperature system. Review of Scientific Instruments, 2019, 90, .	0.6	5
64	Effects of Laserâ€Scribed Mo Groove Shape on Highly Efficient Zn(O,S)â€Based Cu(In,Ga)Se 2 Solar Modules. Solar Rrl, 2020, 4, 1900510.	3.1	5
65	Step effects on diffusion near a substrate reconstructive phase transition:â€ƒH on W(100). Physical Review B, 2003, 68, .	1.1	4
66	Kondo effect of single Co atoms adsorbed on Pb/Si(111) nanoislands. Physical Review B, 2008, 78, .	1.1	4
67	Kinetics of thermal annealing in strained ultrathin Si/Ge superlattices on vicinal Si(100) studied by Raman scattering. Journal of Applied Physics, 1996, 80, 2211-2215.	1.1	3
68	Manipulating the Edge of a Two-Dimensional MgO Nanoisland. Journal of Physical Chemistry C, 2019, 123, 19619-19624.	1.5	3
69	Double-Sided Heat-Exchange CBD System for Homogeneous Zn(O,S) Thin Films in Highly Efficient CIGS Solar Devices. ACS Applied Energy Materials, 2020, 3, 11242-11248.	2.5	3
70	Constructing a Spectral Down Converter to Enhance Cu(In,Ga)Se₂ Solar Cell Performance Using Yttrium Aluminum Garnet:Ce³⁺ Ceramics. Solar Rrl, 2020, 4, 1900518.	3.1	3
71	Mapping potential energy landscape of a probing atom in a complex surface environment. Physical Review B, 2015, 92, .	1.1	2
72	Doping and orientation regulation of p-type Cu:CdS1â˜Se /Pt thin film photocathodes for enhanced photoelectrochemical water splitting. Applied Surface Science, 2021, 566, 150723.	3.1	2

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73	Rear Interface Modification by the ZnTe Layer Enables High-Efficient Cu2(Zn,Cd)SnS4 Thin-Film Solar Cells. ACS Applied Energy Materials, 0, , .	2.5	2
74	Effects of Laserâ€Scribed Mo Groove Shape on Highly Efficient Zn(O,S)â€Based Cu(In,Ga)Se₂ Solar Modules. Solar Rrl, 2020, 4, 2070042.	3.1	1
75	Reversible structural transition of two-dimensional copper selenide on Cu(111). Nanotechnology, 2022, 33, 095704.	1.3	1
76	Traces of iron impurities in copper sources can be a poison to Cu(In, Ga)Se ₂ solar cells. Nano Select, 0, , .	1.9	0